

Appln No. 10/611,807
Amdt date September 27, 2004
Reply to Office action of May 3, 2004

REMARKS/ARGUMENTS

The Office Action dated May 3, 2004, has been reviewed and the comments carefully considered.

In the Office Action, various issues and questions are raised concerning the description of the variety. By the amendments in the accompanying Substitute Specification, Applicant has made a bona fide effort to address all issues and questions.

In view of the foregoing amendment, it is believed that the application is in condition for allowance and, accordingly, reconsideration and allowance is earnestly solicited.

If any questions remain regarding the allowability of the application, Applicant would appreciate if the Examiner would advise the undersigned by telephone.

The Commissioner is hereby authorized to charge any fees under 37 CFR 1.16 and 1.17 which may be required by this paper to Deposit Account No. 03-1728. Please show our docket number with any charge or credit to our Deposit Account.

Respectfully submitted,
CHRISTIE, PARKER & HALE, LLP

By Cynthia A. Bonner
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Amendments to the Drawings:

As requested by the Examiner, replacement sheets for the illustrations of the new variety are attached. These sheets replace the original sheets.

Attachment: Replacement Sheets

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VIOLA PLANT NAMED 'SUNVIOKI'

BOTANICAL/COMMERCIAL CLASSIFICATION

Viola cornuta/Viola Plant

VARIETAL DENOMINATION

5 cv. 'Sunvioki'

BACKGROUND OF THE VARIETY

The genus of *Viola* is included in the family Violaceae,
~~plants~~ and has about 500 species of annuals, biennials,
evergreen, and semi - evergreen and deciduous perennials found
10 in varied habitats in temperature regions worldwide.

Each flower has 5 petals: a spurred lower petal, 2
lateral petals and 2 upward-facing upper petals.

Many cultivars within the genus are informally referred
to as garden pansies[[,]]. Violas ~~violas~~ ~~they~~ are all derived
15 from the complex hybridization of *V.tricolour*, *V.lutea*,
V.cornuta, and other species.

Viola cornuta has played an important role in the
development of garden violas and violettas as a result of
cross breeding with the garden pansy, ~~which~~ *V. wittorockiana*.

20 *Viola cornuta* is stem prostrate[[,]]. Leaves ~~is~~ are
narrow to broad ovate, base cordate to truncate, margin deeply
segmented.

The female parent used in the crossing for obtaining of
'SUNVIOKI' was '9V-39a' (not patented in the United
25 States~~which is our breeding line and grown at Omi R&D Center~~
~~of Suntory Flowers Ltd.~~

The pollen parent used in the crossing for obtaining of
'SUNVIOKI' is a commercial cultivar, ~~was~~ 'Alpine Sun', ~~whose~~
~~seeds were bought from Daiichi Seed Co., Ltd. (Japan).~~

30 BREEDING PROCESS

~~First of all, crossing~~ Crossing between '9V-39a' as female
parent and 'Alpine Sun' as male parent was conducted in Shiga-

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ken, Japan, ~~at the Omi R&D Center of Suntory Flowers Ltd.~~ in April 2000. In May, ~~some~~ seeds were obtained from the crossing. ~~The seeds were sown and grown there.~~ In August, 3 three seedlings were selected in view of having highly spreading habit with yellow petals ~~from 20 seedlings obtained,~~ and were propagated by cutting. ~~Those seedlings were carried out a trial~~ A trial was carried out for those seedlings by flower potting and bedding from October 2001, ~~at the Omi R&D Center of Suntory Flowers Ltd.~~ Finally ~~one~~ One variety was selected in view of having long blooming time. The botanical characteristics of that plant were then examined, using similar ~~variety~~ varieties 'Alpine Spring' and 'Violetto Lune' for comparison. As a result, it was concluded that this *Viola cornuta* plant is distinguishable from any other variety, whose existence is known to us, and uniform and stable in its characteristics. Then ~~the new~~ variety of *Viola cornuta* plant was named 'SUNVIOKI'.

This new and distinct variety of *Viola cornuta* plant, 'SUNVIOKI', was asexually reproduced by tissue culture ~~at the aforementioned the Omi R&D Center of Suntory Flowers Ltd.,~~ and the homogeneity and stability thereof were confirmed. The new variety reproduces true to type in successive generations of asexual reproduction.

~~Those of~~ *Viola cornuta* plants, '9V-39a' and 'Alpine Sun' are presently maintained at ~~the Omi R&D Center of Suntory Flowers Ltd., located at 863 1, Aza Iketani, Omeri-cho, Yokaichi-shi, Shiga-ken, Japan.~~

DESCRIPTION

In the following description, the color-coding is in accordance with the Horticultural ~~Color~~ Colour Chart of The Royal Horticultural Society, London, England (R.H.S. ~~Color~~ Chart).

The botanical characteristics of the female parent plant '9V-39a' used in the crossing of 'SUNVIOKI' are as follows.

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Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 9 cm

5 Plant cover - Approximately 49 cm

Stem:

Length - Approximately 36 cm

Branching - Much

Pubescence - Present

10 Leaf:

~~Overall~~Overall form - Long oblong

Apex form - Acute

Base form - Acute

Serrated, lobed or not - Serrated or lobed

15 Margin - Serrated or slightly lobed

Length - Approximately 1.9 cm

Width - Approximately 1.2 cm

Color of upper surface - Grayish olive green (near R.H.S. 137A)

20 Color of under surface - Moderate yellow green (near R.H.S. 137C)

Variegation - Absent

Leaf luster - Lustrous

Vein - Distinct

25 Petiole length - Approximately 1.4 cm

Stipule length - Approximately 1.8 cm

Flower:

Peduncle length - Approximately 7.5 cm

Peduncle thickness - Thin

30 Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.2 cm

Horizontal diameter - Approximately 3.0 cm

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Ruffle of petal margin - Weakly ruffled

Petal curving - Very weak

Petal number - Single

Flower color - ~~Self~~Single-colored

5 Upper petal

Form - Round

Size - Approximately 1.6×1.6 cm

Petal color - ~~Self~~Single-colored

Ground color - Pale yellow green (near R.H.S. 157A)

10 Blotch - Absent

Side petal

Form - Ovate

Size - Approximately 1.3×1.5 cm

Petal color - ~~Self~~Single-colored

15 Ground color - Pale yellow green (near R.H.S. 157A)

Blotch - Absent

Lower petal

Form - Cordate

Size - Approximately 1.9×1.9 cm

20 Petal color - ~~Self~~Single-colored

Ground color - Pale yellow green (near R.H.S. 157A)

Blotch - Absent

Eye color - Vivid reddish yellow (near R.H.S. 14A)

Eye size - Medium

25 Thickness of petal - Medium

Spur length - Longer than the sepal appendage

Sepal - Short

Number of flowers - Many

Seed:

30 Color - Deep brown

Physical property:

Flowering time - Late

Fragrance - Faint or weak

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Resistance

Rain - Strong

Cold - Strong

Heat - Medium

5 Disease - Strong

Pest - Strong

~~And the~~ The botanical characteristics of the male parent plant 'Alpine Sun' used in the crossing of 'SUNVIOKI' are as follows.

10 Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 8 cm

Plant cover - Approximately 35 cm

15 Stem:

Length - Approximately 25 cm

Branching - Much

Pubescence - Present

Leaf:

20 Overall form - Long oblong

Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

25 Length - Approximately 2.1 cm

Width - Approximately 1.0 cm

Color of upper surface - Grayish olive green (near R.H.S. 137A)

30 Color of under surface - Moderate yellow green (near R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

Petiole length - Approximately 2.2 cm

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Stipule length - Approximately 2.1 cm

Flower:

Peduncle length - Approximately 8.0 cm

Peduncle thickness - Thin

5 Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.3 cm

Horizontal diameter - Approximately 2.5 cm

10 Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

Flower color - ~~Self~~Single-colored

Upper petal

15 Form - Round

Size - Approximately 1.1x1.0 cm

Petal color - Self-colored

Ground color - Vivid yellow (near R.H.S. 9B)

Blotch - Absent

20 Side petal

Form - Ovate

Size - Approximately 1.2x1.0 cm

Petal color - ~~Self~~Single-colored

Ground color - Vivid yellow (near R.H.S. 9B)

25 Blotch - Absent

Lower petal

Form - Cordate

Size - Approximately 1.4x1.3 cm

Petal color - ~~Self~~Single-colored

30 Ground color - Vivid yellow (near R.H.S. 9A)

Blotch - Absent

Eye color - Vivid yellow (near R.H.S. 13A)

Eye size - Small

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Thickness of petal - Thin
Spur length - Longer than the sepal appendage
Sepal - Short
Number of flowers - Many

5 Seed:

Color - Deep brown

Physical property;

Flowering time - Late

Fragrance - Absent

10 Resistance

Rain - Medium

Cold - Strong

Heat - Medium

Disease - Strong

15 Pest - Strong

The botanical characteristics of the similar variety
'Alpine Spring' used for examination as a comparison are as
follows.

Plant:

20 Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 8 cm

Plant cover - Approximately 35 cm

Stem:

25 Length - Approximately 25 cm

Branching - Much

Pubescence - Present

Leaf:

Overall form - Long oblong

30 Apex form - Obtuse

Base form - Acute

Serrated, lobed or not - Serrated or lobed

Margin - Serrated or slightly lobed

Length - Approximately 2.1 cm

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Width - Approximately 1.0 cm

Color of upper surface - Grayish olive green (near R.H.S. 137A)

Color of under surface - Moderate yellow green (near R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

Petiole length - Approximately 2.2 cm

Stipule length - Approximately 2.1 cm

Flower:

Peduncle length - Approximately 8.0 cm

Peduncle thickness - Thin

Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Upward

Longitudinal diameter - Approximately 3.3 cm

Horizontal diameter - Approximately 2.5 cm

Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

Flower color - ~~Self~~Single-colored

Upper petal

Form - Round

Size - Approximately 1.1x1.0 cm

Petal color - ~~Self~~Single-colored

Ground color - Brilliant yellow green (near R.H.S.

2B)

Blotch - Absent

Side petal

Form - Ovate

Size - Approximately 1.2x1.0 cm

Petal color - ~~Self~~Single-colored

Ground color - Vivid yellow (near R.H.S. 9B)

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Blotch - Absent

Vein color - Dark reddish purple (near R.H.S. 79A)

Lower petal

Form - Cordate

5 Size - Approximately 1.4x1.3 cm

Petal color - ~~Self~~Single-colored

Ground color - Vivid yellow (near R.H.S. 9A)

Blotch - Absent

Vein color - Dark reddish purple (near R.H.S. 79A)

10 Eye color - Vivid yellow (near R.H.S. 13A)

Eye size - Small

Thickness of petal - Thin

Spur length - Longer than the sepal appendage

Sepal - Short

15 Number of flowers - Many

Seed:

Color - Deep brown

Physical property:

Flowering time - Late

20 Fragrance - Absent

Resistance

Rain - Medium

Cold - Strong

Heat - Medium

25 Disease - Strong

Pest - Strong

The botanical characteristics of the similar variety
'Violetto Lune' used for examination as a comparison are as
follows.

30 Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

Height - Approximately 6 cm

Plant cover - Approximately 40 cm

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Stem:

Length - Approximately 26 cm

Branching - Much

Pubescence - Present

5 Leaf:

Overall form - Long oblong

Apex form - Obtuse

Base form - Obtuse

Serrated, lobed or not - Serrated or lobed

10 Margin - Serrated or slightly lobed

Length - Approximately 2.2 cm

Width - Approximately 1.6 cm

Color of upper surface - Grayish olive green (near R.H.S. 137B)

15 Color of under surface - Moderate yellow green (near R.H.S. 137C)

Variegation - Absent

Leaf luster - Matte

Vein - Apparent

20 Petiole length - Approximately 1.3 cm

Stipule length - Approximately 2.0 cm

Flower:

Peduncle length - Approximately 9.0 cm

Peduncle thickness - Thin

25 Peduncle color - Strong yellow green (near R.H.S. 144B)

Flower form - Vertically oblong

Flowering direction - Horizontal

Longitudinal diameter - Approximately 3.4 cm

Horizontal diameter - Approximately 2.9 cm

30 Ruffle of petal margin - Flat

Petal curving - Weak

Petal number - Single

Flower color - ~~Self~~Single-colored

Upper petal

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- 5 Form - Round
 Size - Approximately 1.9×1.9 cm
 Petal color - ~~Self~~Single-colored
 Ground color - Vivid yellow (near R.H.S. 9A)
 Blotch - Absent
- Side petal
 Form - Round
 Size - Approximately 1.2×1.1 cm
 Petal color - ~~Self~~Single-colored
10 Ground color - Vivid yellow (near R.H.S. 9A)
 Blotch - Absent
- Lower petal
 Form - Cordate
 Size - Approximately 1.8×1.1 cm
15 Petal color - ~~Self~~Single-colored
 Ground color - Vivid yellow (near R.H.S. 12A)
 Blotch - Absent
 Eye color - Vivid yellow (near R.H.S. 13A)
 Eye size - Small
- 20 Thickness of petal - Thin
 Spur length - Longer than the sepal appendage
 Sepal - Short
 Number of flowers - Many
- Seed:
- 25 Color - Deep brown
- Physical property:
- Flowering time - Late
 Fragrance - Absent
 Resistance
- 30 Rain - Medium
 Cold - Strong
 Heat - Medium
 Disease - Strong

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Pest - Strong

SUMMARY OF THE NEW VARIETY

The new variety of viola plant named 'SUNVIOKI', which is
~~the first~~ a vegetative propagated variety, has a spreading
5 plant habit with very long epigeal stem. The plant height is
low and the branching is abundant. The flowers of the new
variety are vertically oblonged and very small, and the color
of flower is brilliant greenish yellow with vivid yellow eye.
The new variety has a high resistance to cold, pests and
10 diseases.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a photograph giving a partial view of the new
variety of *Viola cornuta* plant 'SUNVIOKI' planted in pots.

FIG. 2 is a photograph of flowers of the new variety of
15 *Viola cornuta* plant 'SUNVIOKI'.

DESCRIPTION OF THE VARIETY

The botanical characteristics of this new and distinct
variety of *Viola cornuta* plant named 'SUNVIOKI' are as
follows. The plant was observed at Yokaich-shi, Shiga-ken,
20 Japan. The plant was approximately seven months old and was
grown in a 30 cm diameter container.

Plant:

Stemmed or non-stemmed - Stemmed

Growth habit - Spreading

25 Height - Approximately 8 cm

Plant cover - Approximately 75 cm

Stem:

Length - Approximately 45 cm

Branching - abundant

30 Pubescence - Present

Internode length - Approximately 1.8 cm

Color - Near R.H.S. 144B

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Leaf:

- ~~Overall~~Overall form - Long oblong
Apex form - Obtuse
Base form - Acute
5 Serrated, lobed or not - Serrated or lobed
Margin - Serrated or slightly lobed
Length - Approximately 3.5 cm
Width - Approximately 1.7 cm
Color of upper surface - Grayish olive green (R.H.S.
10 137A)
Color of under surface - Moderate yellow green (R.H.S.
137C)
Variegation - Absent
Leaf luster - Matte
15 Vein - Apparent
Leaf venation color - Near R.H.S. 144A
Petiole length - Approximately 2.5 cm
Leaf petiole diameter - Approximately 0.2 cm
Leaf petiole color - Near R.H.S. 143C
20 Stipule length - Approximately 1.5 cm
Stipule shape (type) - Narrowly ovate pinnately parted
Stipule width - Approximately 0.6 to 0.8 cm.
Stipule color
Upper side surface - Near R.H.S. 146B
25 Underside surface - Near R.H.S. 146C
Flower:
Bud
Shape - Lenticular
Length - Approximately 1.0 - 1.5 cm.
30 Diameter - Approximately 0.2 to 0.4 cm.
Color - Near R.H.S. 2B
Peduncle length - Approximately 10.0 cm
~~Peduncle thickness - Thin~~
Peduncle diameter - Approximately 0.1 cm.

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- Peduncle color - Strong yellow green (near R.H.S. 144A)
Flower form - Vertically oblong
Flowering direction - Upward
Longitudinal diameter - Approximately 3.5 cm
5 Horizontal diameter - Approximately 2.6 cm
Flower depth - Approximately 0.9 cm.
Ruffle of petal margin - Weakly ruffled
Petal curving - Weak
~~Petal number - Single~~
10 Number of petals per flower - Five (two upper petals,
two side petals and one lower petal)
Flower color - ~~Self colored~~Single-colored
Upper petal
~~Form - Ovate~~
15 Size - Approximately 1.8x1.3 cm
Shape - Obovate
Apex shape - Rounded
Base shape - Truncate
Margin - Entire
20 ~~Flower color - Self colored~~
~~Ground color - Brilliant greenish yellow (R.H.S. 5B)~~
Upper surface color - Near R.H.S. 5B, underside
surface color - Near R.H.S. 3B
Blotch - Absent
25 Side petal
~~Form - Ovate~~
Size - Approximately 1.3x1.1 cm
Side petal shape - Obovate
Apex shape - Rounded
30 Base shape - Attenuate
Margin - Entire
~~Petal color - Self colored~~
~~Ground color - Brilliant greenish yellow (R.H.S. 5A)~~
Upper surface color - Near R.H.S. 5A; Underside

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- surface color - Near R.H.S. 3B
Blotch - Absent
Lower petal
~~Form - Cordate~~
- 5 Size - Approximately 1.7x1.8 cm
 Shape - Cordate
 Apex shape - Emarginate
 Base shape - Cuneate
 Margin - Entire
- 10 ~~Petal color - Self colored~~
 ~~Ground color - Brilliant greenish yellow (R.H.S. 5A)~~
 Upper surface color - Near R.H.S. 5A; Underside
 surface color - Near R.H.S. 3B
 Blotch - Absent
- 15 Eye color - Vivid yellow (Near R.H.S. 13A)
 Eye size - Small
Thickness of petal - Thin
Spur
 Length - ~~Longer than the sepal appendage~~
20 Approximately 0.6 to 0.8 cm
 Diameter - Approximately 0.2 cm
 Color - Near R.H.S. 157A
- Sepal ~~Short~~
 Number - 5
- 25 Shape - Narrowly triangular
 Length - Approximately 1.8 cm
 Width - Approximately 0.3 cm
 Upper surface color - Near R.H.S. 146C
 Underside surface color - Near R.H.S. 145B
- 30 Number of flowers - ~~Many~~Approximately 120 flowers present
 on a plant at one time
 Pedicel - None
- Seed:
 Color - Deep brown, near R.H.S. 165B

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Seed number - Approximately 10 per capsule

Seed shape - Ellipsoidal

Physical property:

Flowering time - ~~Early~~From early November to June in
Japan, except for Hokkaido

Time to produce - Approximately four months

Lastingness of an individual bloom on the plant -
Approximately 5 to 7 days

Fragrance - Faint or weak

~~[[<]]~~Resistance~~[[>]]~~ to rain - Medium

~~Rain - Medium~~

~~Cold - Strong~~

Winter hardiness - This variety has survived at a
temperature of at least minus 7°C

Resistance to Heat - Medium

~~Disease - Strong~~

~~Pest - Strong~~

Disease and pests - No serious damage by white fly,
aphids, and bacterial disease has been observed

This new variety of *Viola cornuta* plant 'SUNVIOKI' is most suitable for flower bedding and potting, hanging baskets and ground cover.

COMPARISON WITH SIMILAR VARIETY

The new variety of *Viola cornuta* plant 'SUNVIOKI' is different from a similar variety, 'Alpine Spring' in following points,

1. The plant width of 'SUNVIOKI' is wider than that of 'Alpine Spring'.

2. 'SUNVIOKI' has abundant branching compared to 'Alpine Spring' which has less branching.

3. The ruffle of petal margin of 'SUNVIOKI' is weakly ruffled while that of 'Alpine Spring' is flat.

4. 'SUNVIOKI' has ~~self~~ single-colored flower while 'Alpine Spring' has multi-colored one.

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5. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Alpine Spring' is R.H.S.2B.

6. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9B with R.H.S.79A vein.

5 7. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Alpine Spring' is R.H.S.9A with R.H.S.79A vein.

8. The flowering time of 'SUNVIOKI' is early while that of 'Alpine Spring' is late.

10 The new variety of *Viola cornuta* plant 'SUNVIOHO' is different from a similar variety, 'Violetto Lune' in following points,

1. 'SUNVIOKI' has abundant branching compared to 'Violetto Lune' which has less branching.

15 2. The leaf color of upper surface of 'SUNVIOKI' is R.H.S.137A while that of 'Violetto Lune' is R.H.S.137B.

3. The color of upper petal of 'SUNVIOKI' is R.H.S.5B while that of 'Violetto Lune' is R.H.S.9A.

4. The color of side petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.9A.

20 5. The color of lower petal of 'SUNVIOKI' is R.H.S.5A while that of 'Violetto Lune' is R.H.S.12A.

6. The flowering time of 'SUNVIOKI' is early while that of 'Violetto Lune' is late.

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CLAIM

1. A new and distinct variety of *Viola cornuta* plant
named 'SUNVIOKI', substantially as herein illustrated and
described, ~~characterized particularly as to novelty by (A)~~
5 ~~being a spreading plant habit having very long epigeal stem,~~
~~(B) the plant height is low (C) the branching is abundant, (D)~~
~~flowers which are vertically oblonged and very small, the~~
~~color of flower is brilliant greenish yellow with vivid yellow~~
~~eye and (E) a high resistance to cold, pests and diseases.~~

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BOTANICAL/COMMERCIAL CLASSIFICATION

Viola cornuta/Viola Plant

VARIETAL DENOMINATION

cv. 'Sunvioki'

5

ABSTRACT OF THE DISCLOSURE

10

Disclosed herein is new *Viola cornuta* plant named 'SUNVIOKI', which is a ~~the first~~ vegetative propagated variety, ~~which was~~ developed by specific hybridization[[,]] between '9V-39a'[[,]] and 'Alpine Sun'. 'Sunvioki' has a spreading habit with very long stem. The plant height is low. The branching is abundant. Flowers are vertically oblong and very small. The color of flower is brilliant greenish yellow with vivid yellow eye. The plant has a high resistance to cold, pests and diseases.